

# First Record of Genus *Xestocoris* (Hemiptera-Heteroptera: Lygaeoidea: Rhyparochromidae: Rhyparochrominae: Lethaeini) from Mexico, with Description of Three New Species

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**ABSTRACT** The genus *Xestocoris* Van Duzee is reported from Mexico for the first time, and three new species, *X. adustus* (Guerrero, Morelos, Nayarit, and Puebla), *X. clavatus* (Chiapas, Guerrero, Michoacan, and Oaxaca), and *X. punctatus* (Chiapas), are described. Two species, *X. collinus* described from Guatemala and Panama, and *X. tibialis* from the United States, are newly recorded for Mexico. Habitus, illustrations, and drawings of the male genitalia are provided, and a key to the known *Xestocoris* species is presented.

**KEY WORDS** Hemiptera, Heteroptera, Lygaeoidea, *Xestocoris*, Mexico

The genus *Xestocoris* was proposed by Van Duzee (1906) to include only the species *X. nitens* Van Duzee, from Canada and the United States. Bergroth (1916) transferred two species described by Distant (1893, 1901) in the genus *Rhaptus* to *Xestocoris*, with the combination *X. collinus* recorded from Guatemala and Panama and *X. uhleri* from the Island of Grenada. The last species was later moved to the genus *Bubaces* (Scudder 1967). Recently, O'Donnell (2007) described *X. tibialis* from the United States.

In the current study, we report for first time the genus *Xestocoris* from Mexico; we describe three new species from the states of Chiapas, Guerrero, Michoacan, Puebla, Nayarit, and Oaxaca; we redescribe *X. collinus* and report it from the states of Guanajuato, Guerrero, and Puebla; and we report *X. tibialis* from Durango.

## Materials and Methods

The following abbreviations indicate institutions where specimens are deposited: Coleccion Entomologica, Instituto de Ecologia, A.C. Xalapa, Veracruz, Mexico (IEXA); Coleccion Nacional de Insectos, Universidad Nacional Autonoma de Mexico, Mexico City (CNIN); and University of Connecticut Insect Collection (UCMS); and Smithsonian Institution, National Insect Collection (NMNH); British Museum of Natural History (BMNH).

Measurements are given in millimeters.

## Results

### *Xestocoris* Van Duzee

**Diagnosis.** Body small; shining dorsal surface covered with long hairs; head with two iridescent spots composed of pegs; eyes with two long forward-curving setae.

### *Xestocoris adustus* Cervantes & Brailovsky, New Species

(Figs. 1, 5A and E)

**Diagnosis.** Body highly polished, general coloration castaneus; densely covered with long hairs directed to the posterior end; submacropterous; clavus with two complete rows of punctures and one incomplete row.

**Male. Holotype.** Dorsal color. Head, pronotum, and scutellum shiny castaneus; antennal segments I and II amber, III and IV slightly darker; eyes reddish brown. Pronotum with collar area slightly paler than the rest. Hemelytra and visible segments of abdomen pale brown. Ventral color. Head and thorax shiny castaneus, with rostrum amber; acetabulae and propleura lighter; legs castaneus, tibiae and tarsi amber; abdominal sterna castaneus. Structure. Head slightly declivent, with ventral area swollen and punctate; tylus broader than antennal segment I; eyes protuberant; antennal segments I to III with base thinner than apex, IV segment fusiform; rostrum reaching metacoxae. Thorax. Pronotum quadrate, anterior margin slightly concave, posterior margin straight; area of collar delimited by a fading row of punctures; calli convex, with few punctures; posterior lobe flat, with scattered punctures; scutellum just slightly convex, with few punctures. Hemelytra short, with membrane reduced; clavus with two complete rows of punctures and one incom-

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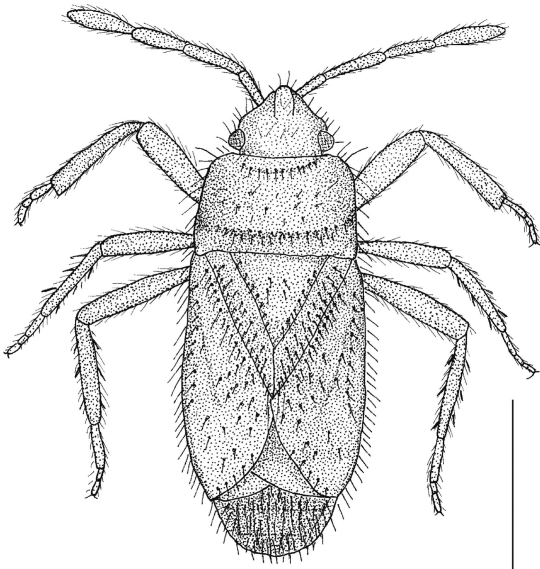


Fig. 1. *Xestocoris adustus* new species, male. Scale bar = 1 mm.

plete row next to the scutellum; claval suture weakly marked; corium with a regular row of punctures along claval suture, rest of corium with scattered punctures. Propleura smooth and shiny; mesopleura and metapleura with punctures along their margins; evaporative area reduced, covering a small area of mesopleura and less than half of metapleura; auricle of metathoracic peritreme comma-shaped. Forefemora swollen; foretibiae slightly wider at apex; tibiae of all legs with long thin spines. Abdomen. Visible dorsal segments covered by long hairs directed backwards; sterna covered with long decumbent hairs. Genitalia. Pygophore opening with a deep middle constriction (Fig. 5A); paramere with wide base and pointed end (Fig. 5E).

**Male Measurements** ( $n = 10$ ). Body length  $2.43 \pm 0.06$ ; head length  $0.37 \pm 0.04$ ; width across eyes  $0.54 \pm 0.01$ ; interocular distance  $0.36 \pm 0.01$ ; preocular distance  $0.23 \pm 0.03$ ; postocular distance  $0.01 \pm 0.01$ ; antennal segment lengths: I  $0.29 \pm 0.02$ , II  $0.38 \pm 0.01$ , III  $0.31 \pm 0.02$ , IV  $0.4 \pm 0.01$ ; rostral segment lengths: I  $0.3 \pm 0.01$ , II  $0.33 \pm 0.02$ , III  $0.24 \pm 0.02$ , IV  $0.22 \pm 0.01$ ; pronotum: length  $0.51 \pm 0.02$ , width across anterior margin  $0.62 \pm 0.01$ ; width across humeral angles  $0.81 \pm 0.02$ ; scutellum: length  $0.48 \pm 0.02$ , width  $0.47 \pm 0.02$ ; foreleg: femur length  $0.59 \pm 0.03$ , tibia length  $0.5 \pm 0.03$ , tarsomere lengths: I  $0.14 \pm 0.01$ , II  $0.06 \pm 0$ , III  $0.08 \pm 0$ ; claval commissure: length  $0.26 \pm 0.02$ ; corium: length  $1.23 \pm 0.02$ .

**Female Measurements** ( $n = 10$ ). Body length  $2.64 \pm 0.1$ ; head length  $0.38 \pm 0.05$ ; width across eyes  $0.56 \pm 0.02$ ; interocular distance  $0.38 \pm 0.01$ ; preocular distance  $0.23 \pm 0.02$ ; postocular distance  $0.02 \pm 0.02$ ; antennal segment lengths: I  $0.3 \pm 0.02$ , II  $0.39 \pm 0.01$ , III  $0.3 \pm 0.01$ , IV  $0.4 \pm 0.02$ ; rostral segment lengths: I  $0.31 \pm 0.01$ , II  $0.36 \pm 0.02$ , III  $0.28 \pm 0.01$ , IV  $0.22 \pm 0.02$ ; pronotum: length  $0.54 \pm 0.03$ , width across anterior

margin  $0.63 \pm 0.02$ , width across humeral angles  $0.85 \pm 0.04$ ; scutellum: length  $0.52 \pm 0.04$ , width  $0.49 \pm 0.02$ ; foreleg: femur length  $0.59 \pm 0.04$ , tibia length  $0.55 \pm 0.04$ , tarsomere lengths: I  $0.14 \pm 0$ , II  $0.06 \pm 0$ , III  $0.08 \pm 0$ ; claval commissure: length  $0.29 \pm 0.02$ ; corium: length  $1.32 \pm 0.06$ .

**Type Material.** Holotype: male, MEXICO: MORELOS, Yautepec, 5-VII-1979, E. Barrera (CNIN). Paratypes. MEXICO: 4 males, 3 females, MORELOS, Yautepec, 5-VII-1979, E. Barrera, H. Brailovsky (CNIN, IEXA); 1 male, 4 females, MORELOS, Yautepec, 25-VI-1979, E. Barrera, H. Brailovsky (CNIN, IEXA); 2 males, GUERRERO, Chichihualco, 6-VII-1979, E. Barrera, H. Brailovsky (CNIN, IEXA); 1 male, 7 females, GUERRERO, Papalutla, 6-III-1987, H. Brailovsky, E. Barrera (CNIN, IEXA, UCMS); 1 male, 3 females, NAYARIT, Ixtlan, 7-VIII-1981, E. Barrera (CNIN, IEXA); 1 male, 2 females, PUEBLA, Valsequillo, 26-V-1994, E. Barrera, H. Brailovsky (CNIN, IEXA); 1 female, PUEBLA, San Miguel Atlapulco, 28-V-1994, E. Barrera, H. Brailovsky (CNIN).

**Etymology.** The name refers to the general color of the insect.

**Distribution.** MEXICO: Morelos, Guerrero, Nayarit, Puebla.

## Discussion

This species is very similar to *X. clavatus*, but it is submacropterous and has the clavus of the same color as the rest of the hemelytra. Individuals from Guerrero were slightly bigger than the rest of the localities.

## *Xestocoris clavatus* Cervantes & Brailovsky, New Species

(Figs. 2, 5B and F)

**Diagnosis.** Dorsally and ventrally polished, varying from black to dark brown, with area of clavus whitish; densely covered with long upstanding hairs; body slightly elongated, with maximum width at level of apex of clavus; macropterous.

**Male. Holotype.** Dorsal color. Head shiny black; antennal segments varying from ochre to dark brown; eyes reddish brown; pronotum shiny black with lateral margins, humeral angles, and posterior margin shiny dark castaneus; scutellum, corium, connexivum, and dorsal abdominal segments shiny dark castaneus, scutellum with apex pale yellow; clavus pale yellow with dark brown punctures, margin next to scutellum slightly darker; membrane grayish. Ventral color. Head and thorax shiny black with acetabulae and posterior margin of metapleura shiny castaneus; rostral segments dark yellowish castaneus; coxae, trochanter, and femora varying from shiny dark castaneus to ochraceous; tibiae and tarsi dark yellowish castaneus; abdominal sterna including the genital capsule shiny dark castaneus. Structure. Head. Slightly pointed; eyes included in the head; ocelli reduced; tylus slightly broader than apex of antennal segment I; antennal segment I to III with base thinner than apex, and IV fusiform; rostrum reaching metacoxae.

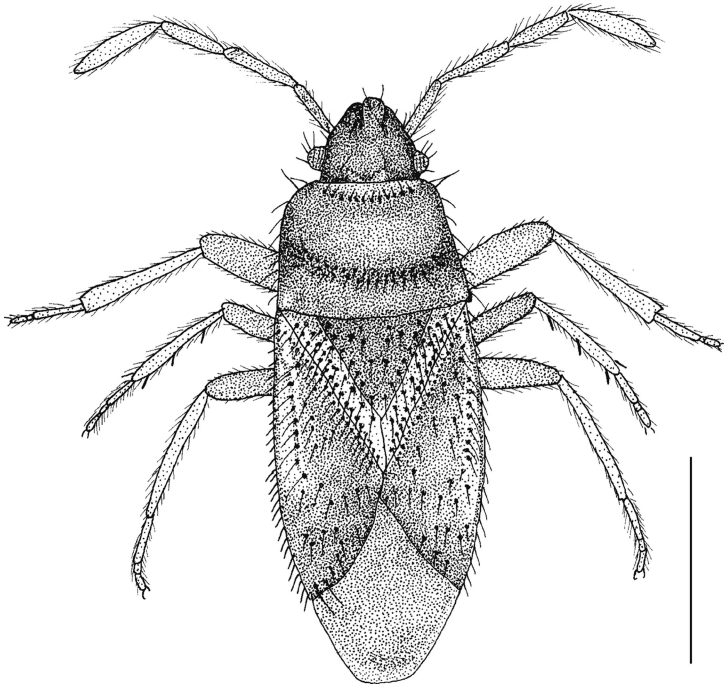


Fig. 2. *Xestocoris clavatus* new species, male. Scale bar = 1 mm.

Ventrally swollen, and heavily punctate. Thorax. Pronotum quadrate, convex and covered by up-standing hairs; anterior margin slightly concave; posterior and lateral margins straight; humeral angles obtuse, somewhat elevated; calli impunctate; anterior third of anterior pronotal lobe, and posterior lobe punctate. Scutellum scarcely punctate. Hemelytra long, coarsely punctate, claval suture visible; hemelytral membrane reaching the last abdominal segment; membrane with no veins marked. Prosternum heavily punctate; propleura smooth, shiny; mesopleura and metapleura with bands of punctures on their anterior and posterior margins and with scattered punctures in the middle area; auricle of metathoracic peritreme raised and comma shaped; evaporative area covering small part of mesopleura and only a very small part of metapleura; forefemur swollen with two inner and very small spines; middle femur slightly swollen and hind femur long, slender without spines; tibiae slender with erect thin spines. Abdomen. Abdominal sterna covered with long decumbent hairs. Genitalia. Opening of the pygophore with small middle constriction (Fig. 5B), paramere with pointed end and wide base (Fig. 5F).

**Male Measurements** ( $n = 10$ ). Body length  $2.44 \pm 0.14$ ; head length  $0.31 \pm 0.04$ ; width across eyes  $0.52 \pm 0.02$ ; interocular distance  $0.35 \pm 0.02$ ; preocular distance  $0.17 \pm 0.02$ ; postocular distance  $0.02 \pm 0.008$ ; antennal segment lengths: I  $0.24 \pm 0.02$ , II  $0.33 \pm 0.02$ , III  $0.27 \pm 0.01$ , IV  $0.37 \pm 0.02$ ; rostral segment lengths: I  $0.26 \pm 0.02$ , II  $0.31 \pm 0.02$ , III  $0.26 \pm 0.02$ , IV  $0.22 \pm 0.006$ ; pronotum: length  $0.52 \pm 0.03$ , width across an-

terior margin  $0.58 \pm 0.01$ , width across humeral angles  $0.81 \pm 0.04$ ; scutellum: length  $0.46 \pm 0.03$ , width  $0.44 \pm 0.04$ ; foreleg: femur length  $0.56 \pm 0.03$ , tibia length  $0.48 \pm 0.02$ , tarsomere lengths: I  $0.12 \pm 0.006$ , II  $0.06 \pm 0$ , III  $0.08 \pm 0.006$ ; claval commissure: length  $0.26 \pm 0.04$ ; corium: length  $1.22 \pm 0.04$ .

**Female Measurements** ( $n = 10$ ). Body length  $2.58 \pm 0.15$ ; head length  $0.35 \pm 0.07$ ; width across eyes  $0.54 \pm 0.02$ ; interocular distance  $0.37 \pm 0.02$ ; preocular distance  $0.21 \pm 0.04$ ; postocular distance  $0.02 \pm 0.01$ ; antennal segment lengths: I  $0.27 \pm 0.03$ , II  $0.36 \pm 0.03$ , III  $0.29 \pm 0.02$ , IV  $0.36 \pm 0.03$ ; rostral segment lengths: I  $0.3 \pm 0.02$ , II  $0.34 \pm 0.02$ , III  $0.26 \pm 0.02$ , IV  $0.22 \pm 0.01$ ; pronotum: length  $0.55 \pm 0.04$ , width across anterior margin  $0.6 \pm 0.03$ , width across humeral angles  $0.87 \pm 0.05$ ; scutellum: length  $0.48 \pm 0.02$ , width  $0.46 \pm 0.03$ ; foreleg: femur length  $0.59 \pm 0.04$ , tibia length  $0.53 \pm 0.04$ , tarsomere lengths: I  $0.13 \pm 0.02$ , II  $0.06 \pm 0$ , III  $0.08 \pm 0$ ; claval commissure: length  $0.26 \pm 0.02$ ; corium: length  $1.3 \pm 0.04$ .

**Type Material.** Holotype: male, MEXICO, GUERRERO, San Luis Acatlán, Km 1 Desviación a Xochiatenco, 22-III-2006, L. Cervantes  $17^{\circ} 09'02''$  N,  $98^{\circ} 41'22''$  W, 2,114 m leaf litter of *Quercus* and *Pinus* sp. (CNIN). Paratypes. MEXICO: 5 males, 4 females, GUERRERO, San Luis Acatlán, Km 1 Desviación a Xochiatenco, 22-III-2006, L. Cervantes  $17^{\circ} 09'02''$  N,  $98^{\circ} 41'22''$  W, 2,114 m leaf litter of *Quercus* and *Pinus* sp. (CNIN, IEXA, UCMS); 1 female, GUERRERO, Chilapa, Km 12 Chilapa-Tlapa, 11-XII-2006, L. Cervantes, C. Mayorga,  $17^{\circ} 36'08''$  N,  $99^{\circ} 06'19''$  W, 1,748 m leaf litter of *Pinus* sp. (CNIN); 1 male, GUERRERO, Tierra Colorada, La Haciendita, 29-III-2006, L. Cer-

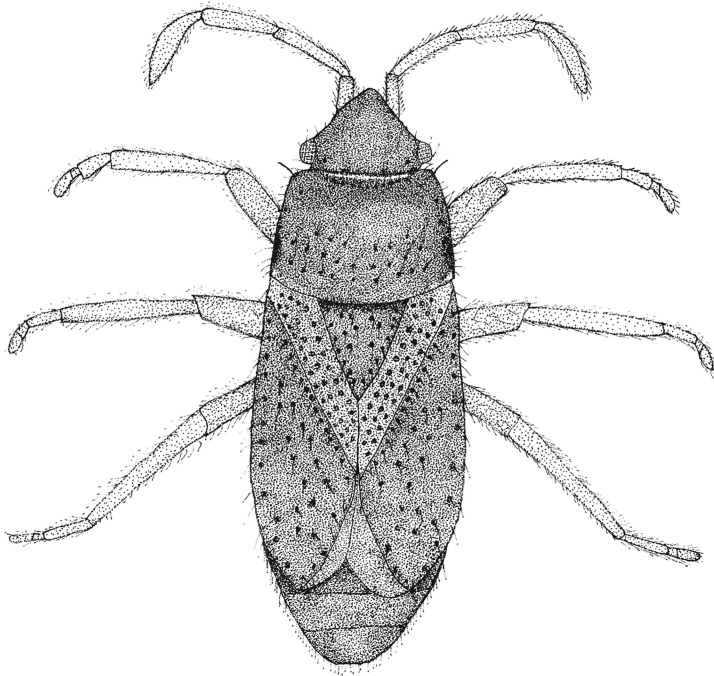


Fig. 3. *Xestocoris punctatus* new species, male. Scale bar = 1 mm.

vantes 17° 22' 24" N, 99° 29' 31" W, 700 m leaf litter of *Quercus* sp. (CNIN); 1 female, GUERRERO, Apaxtla, Presa El Caracol, 21-X-1988, E. Barrera, H. Brailovsky (CNIN); 1 female: GUERRERO, Atoyac, Km 5 Paraiso-Nueva Delhi, 19-IV-1988, A. Cadena, M. Garcia, L. Cervantes (CNIN); 1 male, CHIAPAS, Km 45 Chiapa de Corzo-San Cristóbal de las Casas, 5-IV-1979, E. Barrera (CNIN); 1 male, 9 females, CHIAPAS, Motozintla, Km 12 Motozintla-Huixtla, 18-III-2007, C. Mayorga, G. Ortega, L. Cervantes 15° 19' 21" N, 92° 18' 22" W, 1,591 m (CNIN, IEXA), 4 females, CHIAPAS, Frontera Comalapa, Km 14 Frontera-Comitan, 19-III-2007, C. Mayorga, G. Ortega, L. Cervantes 15° 41' 32" N, 92° 03' 43" W, 799 m (CNIN, IEXA), 4 males, 4 females, MICHOACAN, Km 192 Huetamo-Ciudad Altamirano, 3-VI-1988, A. Cadena, L. Cervantes (CNIN, IEXA, NMNH), 3 males, 1 female, OAXACA, Putla, Km 15 Putla-Tlaxiaco, 8-IV-2005, L. Cervantes, E. Elizalde, S. Gámez, 17° 03' 41" N, 97° 52' 11" W, 566 m, pine and oak forest (IEXA), 2 males, OAXACA, Miahuatlan, Km 15 Miahuatlan-Puerto Angel, 6-IV-2005, L. Cervantes, E. Elizalde, S. Gámez, 16° 14' 55" N, 96° 32' 43" W, 2,047 m, oak forest (IEXA), 8 males, 3 females, OAXACA, Ejutla, Km 65 Oaxaca-Puerto Angel, 6-IV-2005, L. Cervantes, E. Elizalde, S. Gámez, 16° 28' 02" N, 96° 43' 41" W, 1,546 m, oak forest (IEXA, NMNH, BMNH).

**Additional Material.** 1 male, 1 female intercepted at Laredo, TX, 21-VI-1943, 32050 Lot 43-5932, on orchid (NMNH).

**Etymology.** The name refers to the pale color of the clavus.

**Distribution.** MEXICO: Chiapas, Guerrero, Michoacan, and Oaxaca.

## Discussion

This species is very similar to *X. adustus*, although there are several characteristics that distinguished them. *X. clavatus* is macropterous and have whitish clavus, whereas *X. adustus* is submacropterous and have the clavus of the same color of the rest of the hemelytra; there are also slight differences in the opening of the pygophore, in *X. adustus*, the opening has a deeper constriction (Fig. 5A), and the paramere are slightly more pointed (Fig. 5E), whereas in *X. clavatus* the constriction of the pygophore is not deep (Fig. 5B) and the paramere is less pointed (Fig. 5F). Individuals of *X. adustus* from Guerrero were slightly bigger than the rest of the localities.

## *Xestocoris punctatus* Cervantes & Brailovsky New Species

(Figs. 3, 5C and G)

**Diagnosis.** Dorsal and ventrally polished, varying from black to dark brown, with area of clavus densely covered with large punctures; body slightly elongated, with maximum width at level of apex of clavus; submacropterous.

**Male. Holotype.** Dorsal color. Head shiny dark brown to black; antennal segments varying from ochre; eyes reddish brown; pronotum shiny dark brown to black with humeral angles, and posterior margin shiny castaneus; scutellum, corium, connexivum, and dorsal abdominal segments shiny dark castaneus; clavus slightly paler than the rest of the hemelytra with dark brown punctures; hemelytral membrane castaneus. Ventral color. Head and thorax



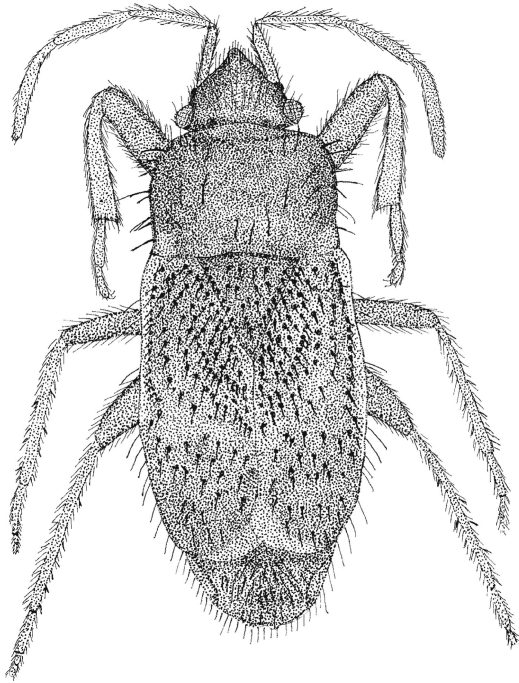


Fig. 4. *Xestocoris collinus*, male. Scale bar = 1 mm.

shiny dark brown to black; rostral segments ochre; coxae, trochanter, and femora varying from shiny dark castaneus to ochraceous; tibiae and tarsi dark yellowish; abdominal sterna dark castaneus with last three sternites slightly paler. Structure. Head. Slightly pointed; ocelli very small; tylus weakly broader than apex of antennal segment I; antennal segment I to III with base thinner than apex, IV fusiform; rostrum reaching metacoxae; ventrally swollen, and punctated. Thorax. Pronotum quadrate, convex and covered by upstanding hairs; posterior and lateral margins straight; humeral angles obtuse, somewhat elevated; calli with very few punctures. Scutellum scarcely punctated. Hemelytra long, coarsely punctate; claval suture visible with three rows of large punctures; punctures of corium along the clavus also large; hemelytral membrane very short, leaving last abdominal segment exposed; prosternum heavily punctate; propleura smooth, shiny; mesopleura and metapleura with bands of punctures on their anterior and posterior margins; auricle of metathoracic peritreme raised and comma shaped; forefemur swollen with two or three inner and very small spines; middle femur slightly swollen and hind femur long; tibiae slender with erect thin spines. Abdomen. Abdominal sterna covered with long decumbent hairs. Genitalia. Opening of pygophore with small middle constriction (Fig. 5C) paramere with apex pointed and base wide (Fig. 5G).

**Male Measurements** ( $n = 2$ ). Body length 3.1; head length  $0.46 \pm 0.01$ ; width across eyes  $0.65$ ; interocular distance  $0.4 \pm 0.01$ ; preocular distance  $0.3$ ; postocular distance  $0.02$ ; antennal segment lengths: I  $0.41 \pm 0.01$ , II  $0.51 \pm 0.01$ , III  $0.41 \pm 0.01$ , IV  $0.52 \pm 0.01$ ; rostral

segment lengths: I  $0.4$ , II  $0.4 \pm 0.04$ , III  $0.32 \pm 0.04$ , IV  $0.29 \pm 0.01$ ; pronotum: length  $0.66 \pm 0.01$ , width across anterior margin  $0.59 \pm 0.01$ , width across humeral angles  $0.94 \pm 0.02$ ; scutellum: length  $0.48 \pm 0.05$ , width  $0.47 \pm 0.07$ ; foreleg: femur length  $0.76 \pm 0.02$ , tibia length  $0.71 \pm 0.01$ , tarsomere lengths: I  $0.19 \pm 0.01$ , II  $0.06 \pm 0.01$ , III  $0.12$ ; claval commissure: length  $0.34 \pm 0.04$ ; corium: length  $1.48 \pm 0.04$ .

**Female Measurements** ( $n = 7$ ). Body length  $3.42 \pm 0.09$ ; head length  $0.54 \pm 0.06$ ; width across eyes  $0.69 \pm 0.01$ ; interocular distance  $0.45 \pm 0.01$ ; preocular distance  $0.35 \pm 0.04$ ; postocular distance  $0.02 \pm 0.01$ ; antennal segment lengths: I  $0.44 \pm 0.02$ , II  $0.52 \pm 0.02$ , III  $0.43 \pm 0.02$ , IV  $0.53 \pm 0.02$ ; rostral segment lengths: I  $0.43 \pm 0.02$ , II  $0.48 \pm 0.03$ , III  $0.37 \pm 0.01$ , IV  $0.32 \pm 0.01$ ; pronotum: length  $0.71 \pm 0.04$ , width across anterior margin  $0.61 \pm 0.02$ , width across humeral angles  $0.98 \pm 0.05$ ; scutellum: length  $0.58 \pm 0.02$ , width  $0.52 \pm 0.04$ ; foreleg: femur length  $0.79 \pm 0.02$ , tibia length  $0.76 \pm 0.02$ , tarsomere lengths: I  $0.2 \pm 0.03$ , II  $0.08 \pm 0.01$ , III  $0.08$ ; claval commissure: length  $0.39 \pm 0.03$ ; corium: length  $1.68 \pm 0.04$ .

**Type Material.** Holotype: male, CHIAPAS, Motozintla, Km 12 Motozintla-Huixtla, 18-III-2007, C. Mayorga, G. Ortega, L. Cervantes  $15^{\circ} 19' 21''$  N,  $92^{\circ} 18' 22''$  W, 1,591 m (CNIN). Paratypes. 1 male, 6 females, CHIAPAS, Motozintla, Km 12 Motozintla-Huixtla, 18-III-2007, C. Mayorga, G. Ortega, L. Cervantes  $15^{\circ} 19' 21''$  N,  $92^{\circ} 18' 22''$  W, 1,591 m (CNIN, IEXA, NMNH).

**Etymology.** The name refers to the very large punctures of the clavus.

**Distribution.** MEXICO: Chiapas.

## Discussion

This species is very similar to *X. clavatus* Cervantes & Brailovsky, although there are several characteristics that distinguish them, especially their size, *X. clavatus* being smaller (between 2.44 and 2.58 mm) and macropterous, whereas *X. punctatus* is larger (between 3.1 and 3.42 mm) and submacropterous; both species have pale clavus although in *X. clavatus* it is whitish and in *X. punctatus* it is pale castaneus with larger punctures. There are also slight differences in the opening of the pygophore; in *X. punctatus* it has a middle constriction (Fig. 5C) and the paramere is slightly more pointed (Fig. 5G), whereas in *X. clavatus* there is no constriction (Fig. 5B) and the paramere is less pointed (Fig. 5F).

### *Xestocoris collinus* (Distant)

(Figs. 4, 5D and H, 6A)

**Diagnosis.** Dorsally and ventrally highly polished, varying from black to dark reddish brown; densely covered with long upstanding hairs; body slightly elongated, with maximum width at level of apex of clavus; submacropterous.

**Redescription Male.** Dorsal color. Head shiny black with apex of tylus narrowly dark yellowish castaneus; antennal segment I dark yellowish castaneus, II-III yellowish

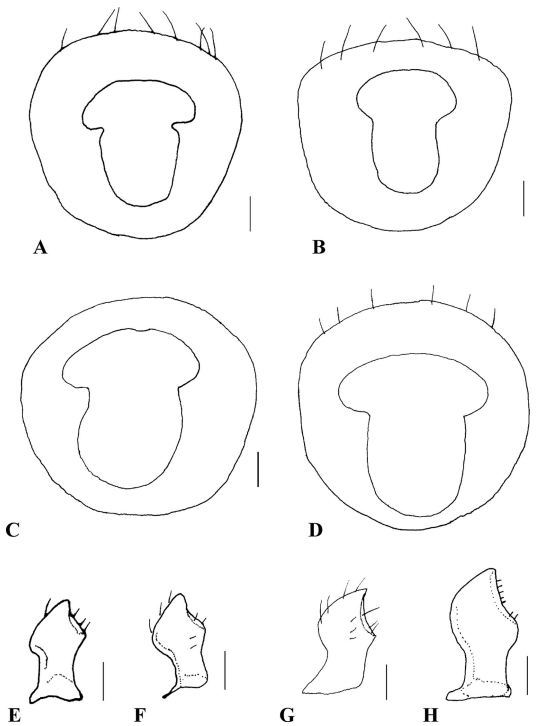


Fig. 5. (A–D) Pygophores, A. *Xestocoris adustus* new species. (B) *Xestocoris clavatus* new species. (C) *Xestocoris punctatus* new species, (D) *Xestocoris collinus*. (E–H) Parameres. (E) *Xestocoris adustus*. (F) *Xestocoris clavatus*. (G) *Xestocoris punctatus*. (H) *Xestocoris collinus*. Scale bar = 0.01 mm.

lowish orange with apical joint darker, and IV yellowish orange with basal joint darker; eyes reddish brown; pronotum shiny black with lateral margins, humeral angles, and posterior margin shiny dark castaneus; scutellum, clavus, corium, connexivum, and dorsal abdominal segments shiny dark castaneus. Ventral color. Head and thorax shiny black with acetabulae and posterior margin of metapleura shiny dark castaneus; rostral segments dark yellowish castaneus with apex of IV black; coxae, trochanter, and femora shiny dark castaneus orange; tibiae and tarsi dark yellowish castaneus; abdominal sterna including the genital capsule shiny dark castaneus with dark orange reflections. Structure. Head. Slightly quadrate; eyes included in the head; ocelli reduced; tylus as broad as apex of antennal segment I; antennal segment I to III with base thinner than apex, and IV fusiform; rostrum reaching mesocoxae. Ventrally swollen, and heavily punctate. Thorax. Pronotum quadrate, convex and covered by upstanding hairs; anterior margin slightly concave; posterior margin straight; lateral margins slightly sinuate; humeral angles obtuse, somewhat elevated; calli impunctate. Scutellum convex, scarcely punctate. Hemelytra short, coarsely punctate, and living abdominal segments VI and VII exposed; claval suture only visible as a paler area; clavus with three rows of punctures; hemelytral membrane reduced. Prosternum heavily punctate; propleura smooth, shiny; mesopleura

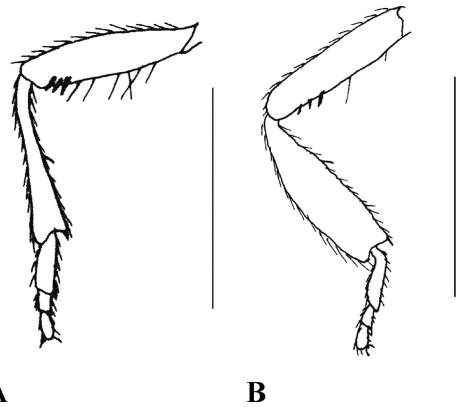


Fig. 6. Forelegs. (A) *Xestocoris collinus*. (B) *Xestocoris tibialis*. Scale bar = 1 mm.

and metapleura with bands of punctures on their anterior and posterior margins; auricle of metathoracic peritreme raised and comma shaped; evaporative area covering small part of mesopleura and covering less than half of metapleura; forefemur swollen with three inner and one outer spines (Fig. 6A); middle femur slightly swollen and hind femur long, slender without spines; tibiae slender with erect thin spines, more abundant on outer side. Abdomen. Visible dorsal segments covered by erect hairs; abdominal sterna covered with long decumbent hairs. Genitalia. Pygophore opening mushroom shape (Fig. 5D); paramere with wide base and slightly pointed end (Fig. 5H).

**Female.** Dorsal color. Head, pronotum, and scutellum shiny black; clavus, corium, connexivum, and dorsal abdominal segments shiny dark castaneus; antennal segment I shiny black, II to IV dark castaneus orange; eyes reddish brown; apex of tylus narrowly dark yellowish castaneus. Ventral color. Shiny black to dark reddish brown; rostral segments dark castaneus orange (apex of IV black); coxae, trochanter and femora shiny black to reddish brown; apical joint of femora dark yellow; tibiae and tarsi shiny castaneus orange.

**Male Measurements ( $n = 2$ ).** Body length  $3.35 \pm 0$ ; head length  $0.44 \pm 0.02$ ; width across eyes  $0.74 \pm 0.04$ ; interocular distance  $0.48 \pm 0.04$ ; preocular distance  $0.31 \pm 0.01$ ; postocular distance  $0.02 \pm 0$ ; antennal segment lengths: I  $0.45 \pm 0$ , II  $0.52 \pm 0$ , III  $0.44 \pm 0.02$ , IV  $0.58 \pm 0.04$ ; rostral segment lengths: I  $0.41 \pm 0.01$ , II  $0.49 \pm 0.01$ , III  $0.35 \pm 0$ , IV  $0.29 \pm 0.01$ ; pronotum: length  $0.74 \pm 0.02$ , width across anterior margin  $0.81 \pm 0.01$ ; width across humeral angles  $1.1 \pm 0.03$ ; scutellum: length  $0.63 \pm 0.07$ , width  $0.6 \pm 0.03$ ; foreleg: femur length  $0.82 \pm 0$ , tibia length  $0.8 \pm 0$ , tarsomere lengths: I  $0.22 \pm 0$ , II  $0.07 \pm 0$ , III  $0.11 \pm 0.01$ ; claval commissure: length  $0.44 \pm 0.02$ ; corium: length  $1.66 \pm 0.08$ .

**Female Measurements ( $n = 3$ ).** Body length  $3.92 \pm 0.8$ ; head length  $0.51 \pm 0.04$ ; width across eyes  $0.8 \pm 0$ ; interocular distance  $0.52 \pm 0.02$ ; preocular distance  $0.37 \pm 0.02$ ; postocular distance  $0.04 \pm 0.02$ ; antennal segment lengths: I  $0.47 \pm 0.04$ , II  $0.59 \pm 0.04$ , III  $0.48 \pm 0.02$ , IV  $0.63 \pm 0.02$ ; rostral segment lengths: I  $0.47 \pm 0.02$ ,

II 0.53 ± 0.03, III 0.42 ± 0.03, IV 0.37 ± 0.03; pronotum: length 0.82 ± 0.04, width across anterior margin 0.92 ± 0.02, width across humeral angles 1.21 ± 0.01; scutellum: length 0.73 ± 0.04, width 0.65 ± 0.05; foreleg: femur length 0.97 ± 0.04, tibia length 0.9 ± 0.04, tarsomere lengths: I 0.25 ± 0.02, II 0.09 ± 0.01, III 0.13 ± 0.02; claval commissure: length 0.5 ± 0.04; corium: length 2.05 ± 0.06.

**Distribution.** Previously known from Guatemala (Quiche Mountains), and Panama.

**Material Studied.** New records. MEXICO: 1 male, GUANAJUATO, Victoria, Km 56 San Luis de la Paz-Xichu, 21-IV-2007, L. Cervantes, E. Barrera, 21° 18'41" N, 100° 09'12" W, 2,423 m, oak and pine forest, 1 male, 2 females, GUERRERO, San Luis Acatlán, Km 1 Desviación a Xochiatenco, 22-III-2006, L. Cervantes 17° 09'02" N, 98° 41'22" W, 2,114 m leaf litter of *Quercus* and *Pinus* sp. (CNIN, IEXA); 1 male, GUERRERO, San Luis Acatlán, Km 1 Desviación a Xochiatenco, 17-X-2006, C. Mayorga 17° 09' 02" N, 98° 41'22" W, 2,114 m leaf litter of *Quercus* and *Pinus* sp. (IEXA). 1 female, GUERRERO, San Luis Acatlán, Km 58 Tlapa-San Luis Acatlán, 22-IV-2006, H. Brailovsky, L. Cervantes 17° 12'46" N, 98 ° 38'48" W, 2,160 m leaf litter of *Quercus* sp. (IEXA); 1 male, PUEBLA, San Nicolas Bravo, 16-VIII-1992, E. Barrera, C. Mayorga, 19° 00'55" N, 97° 49'26" W, 2,220 m oak forest (CNIN).

*Xestocoris tibialis* O'Donnell  
(Fig. 6B)

**Diagnosis.** Dorsal and ventrally polished, varying from black to dark brown, densely covered with long upstanding hairs; body slightly elongated, with maximum width at level of apex of clavus; foretibiae of males expanded and flattened, with a mid groove (Fig. 6B); submacropterous.

**Distribution.** Previously known only from the United States (Arizona, Mt. Wrightson, Sta. Rita Mts.) (O'Donnell, 2007).

**Material Examined.** New records. MEXICO: 1 male, Durango, Los Mimbres, 6-VIII-1979, H. Brailovsky, in leaf litter of *Arctostaphylos pungens* Kunth (Ericaceae); 1 female, Durango, Santa Lucia, 5-VIII-1979, H. Brailovsky (CNIN).

**Key to the Mexican Species of *Xestocoris***

- 1. Macropterous individuals; clavus slightly whitish . . . . . *X. clavatus* new species

- 1'. Submacropterous individuals; clavus slightly paler or concolorous with corium . . . . . 2
- 2. Area of clavus well defined, with very large punctures, and slightly paler than the rest of the hemelytra . . . . *X. punctatus* new species
- 2'. Area of clavus not very well marked, with small punctures and concolorous with the rest of the hemelytra . . . . . 3
- 3. Species larger than 3.2 mm . . . . . 4
- 3'. Species smaller 2.5–3.0 mm; pronotum and hemelytra uniformly colored . . . . *X. adustus* new species
- 4. Males with foretibiae expanded, flattened, and with mid groove; foretibia broader than forefemur (Fig. 6B) . . . . . *X. tibialis*
- 4'. Males with foretibiae not expanded or flattened; forefemur broader than foretibiae (Fig. 6A) . . . . . *X. collinus*

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